

REMARKS

In the Office Action, the Examiner indicated that claims 1 through 21 are pending in the application and the Examiner rejected all claims.

Claim Rejections, 35 U.S.C. §102

In item 2 on pages 2-3 of the Office Action, the Examiner rejected claims 1-2, 10-14 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,706,239 to Brys ("Brys").

The Present Invention

The present invention discloses a PCMCIA card which comprises an integrated on-board storage battery and charging circuitry for the same. The on-board battery is dedicated to operation of on-board devices that have higher current/power requirements than are available from the 3 and 5 volt pins of the PCMCIA card. When the power requirements for a secondary device exceeds the maximum current and/or power level provided by a primary device, the PCMCIA card is configured to couple the secondary device to the storage battery to provide the secondary device with power at a current and/or power level that exceeds the maximum current and/or power level provided by the primary device. For example, in a cellular device application, during high-load transmit periods, the battery is used to source the power amplifier, and during low-load periods, the battery can be charged by the on-board battery charging circuitry, preparing the battery for the next high current/power transmit burst.

U.S. Patent No. 5,706,239 to Brys

U.S. Patent No. 5,706,239 to Brys teaches a PCMCIA memory card consisting of a memory module having both volatile and non-volatile memory components. Also included is a rechargeable backup battery circuit on the card. The battery acts as a safeguard, providing power to the volatile memory on the card (in the preferred embodiment the volatile memory used is SRAM) in the event of the absence of primary power. The memory card also includes a user selectable paging mode which allows a user to select between multiple addressing schemes.

The Cited Prior Art Does Not Anticipate the Claimed Invention

The MPEP and case law provide the following definition of anticipation for the purposes of 35 U.S.C. §102:

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference."
MPEP §2131 citing *Verdegaal Bros. v. Union Oil Company of California*, 814 F.2d 628, 631, 2 U.S.P.Q. 2d 1051, 1053 (Fed. Cir. 1987)

The Examiner Has Not Established a *prima facie* Case of Anticipation

As noted above, the present claimed invention includes an integrated on-board storage battery. This battery is used to boost current/power levels when a secondary device requires more power than the primary device can provide. Claim 1 states:

"a storage battery capable of delivering power at a current and/or power level that exceeds the maximum current and/or power level provided by said primary device, whereby said PCMCIA card is configured to couple said secondary device to said storage battery on demand to provide said secondary

device with power at a current and/or power level that exceeds the maximum current and/or power level provided by said primary device.”

Each additional independent claim (10 and 13) also state a form of this limitation.

The claimed boosting of the power provided by the primary device of the present claimed invention is novel over the prior art, including Brys. Brys is concerned only with a memory module. This memory module has volatile and non-volatile components. The volatile memory components have faster load times, a longer cycle life and simple read/write operations. The downside to volatile memory, such as the SRAM used by Brys, is that a constant power supply is needed so information stored in the memory is not lost. This is the function of the battery in Brys, sustaining a minimum power level needed to maintain the data stored in the volatile memory components of the card itself when primary power is lost.

Brys is not concerned with boosting a power/current level of a primary device, and contains no teaching of anything remotely close to that. The portion cited by the Examiner (col 4 lines 51-58) states:

“In the event that the primary power signal 22 goes below a predetermined voltage, the battery power circuit 60 senses the voltage decrease and allows the battery 42 to supply power to the volatile SPAM [sic] components 34 and 36, thus retaining data stored in volatile memory”

Brys simply detects when the primary power being supplied to the volatile memory falls below an accepted level and switches to battery power. Brys mentions nothing about using battery power from a PCMCIA card to boost power/current levels provided by the primary device to create a power/current level that exceeds a maximum level possible from the primary device.

Each independent claim specifically states this limitation. Accordingly, each of the independent claims, and all claims depending therefrom, patentably define over Brys and are in condition for allowance.

Rejection of Claims 3-9, 15-21 under 35 U.S.C. §103(a)

On pages 3 and 4 of the Office Action, the Examiner rejected claims 3-4, 9, 15-16 and 21 under 35 U.S.C. §103(a) as being unpatentable over Brys in view of U.S. Patent No. 6,199,168 to Miller.

On pages 4 and 5 of the Office Action, the Examiner rejected claims 5-8 and 17-20 under 35 U.S.C. §103(a) as being unpatentable over Brys in view of U.S. Patent No. 6,838,932 to Izumiyama et al.

U.S. Patent No. 6,199,168 to Miller

U.S. Patent No. 6,199,168 to Miller teaches a power management system for a PC card. The power management system allows for the use of a battery pack attachable to the PC card. The power management system is configured to select power delivery from either the personal computer or the battery pack attached to the PC card. Thus, the power supply of a handheld personal computer does not always have to supply power to a high-powered element on the PC card, such as a radio transceiver. The PC card is selectively powered by either power from the personal computer or power from the battery pack attached to the PC card. This provides for flexibility in power management. If the power available from a handheld personal computer is

sufficient to power the PC card, such as when the personal computer is attached to an external power source, the power supply for the personal computer can supply power to the PC card. Otherwise, the power for the PC card can be supplied by the battery pack attached to the PC card.

U.S. Patent No. 6,838,932 Izumiyama et al.

U.S. Patent No. 6,838,932 to Izumiyama et al (“Izumiyama”) teaches a power amplifier that is capable of adjusting the output of a bias control circuit. This output is used in supplying a bias voltage to a power amplifying stage varied in phase to achieve reduction of power consumption and improvement of linear performance. The power amplifying element is adapted to be switched between an amplifying action and a non-amplifying action. This is done by supplying a switching voltage to the bias control circuit to eliminate power consumption by the power amplifying element during the non-amplifying action. Therefore, the power amplifying element can be set to an operational point based on a phased bias voltage. Power consumption of the power amplifying stage can be maintained constantly at a value lower than a limit value using a non-phased bias voltage. Additionally, the output signal is controlled so as to satisfy a desired linear performance standard.

The Examiner has not Established a *prima facie* Case of Obviousness

As set forth in the MPEP:

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skilled in the art, to modify the reference or to combine reference teachings.

MPEP 2143

Regarding claims 3-4, 9, 15-16 and 21, the Examiner relies upon U.S. Patent No. 6,199,168 to Miller as teaching a secondary device that provides wireless functionality to a primary device, the secondary device including a storage battery capable of delivering power at a current and/or power level that exceeds the maximum current and/or power level provided by the primary device. As seen above, Brys fails to teach a system where battery power is used to boost power/current levels available from the primary device to create a power/current level that exceeds a maximum level available from the primary device. Likewise, Miller fails to teach or suggest this limitation. Miller merely teaches the use of the power supply of a handheld computing device to power a component on a PC card when the handheld computer's power supply is sufficient to power the PC card, such as times when the handheld computer is attached to an external power supply. No teaching of a system where battery power is used to boost power/current levels available from a primary device to create a power/current level that exceeds a maximum level available from the primary device is taught or reasonably suggested in Miller.

No combination of Brys and Miller, whether alone or in combination, teach or suggest the present claimed invention. Therefore, the current claimed invention patentably defines over Brys

in view of Miller, and the Examiner is respectfully requested to reconsider and withdraw the 103(a) rejections of claims 3-4, 9, 15-16 and 21.

Regarding claims 5-8 and 17-20, the Examiner relies upon U.S. Patent No. 6,838,932 to Izumiyama as teaching a secondary device which includes a power amplifier that has power requirements that exceed a maximum current and/or power level of a primary device, the secondary device including a storage battery capable of delivering power at a current and/or power level that exceeds the maximum current and/or power level provided by the primary device. Izumiyama teaches an amplifier that is designed to function below the maximum limits of a current/power supply (col 4 lines 62-67), that is, it does not teach a secondary device that includes a power amplifier that can utilize battery power to boost the current/power level of a primary device to exceed the maximum current and/or power level available from the primary device alone.

Nowhere does Izumiyama teach or suggest an amplifier that has power requirements that exceed a maximum current and/or power level. In fact, Izumiyama is directed more towards power reduction as opposed to boosting power. Additionally, as seen above, Brys fails to teach a system where battery power is used to boost power/current levels from the primary device to create a power/current level that exceeds a maximum level possible from the primary device. Likewise, Izumiyama fails to teach or suggest this limitation.

No combination of Brys and Izumiyama, whether alone or in combination, teach or suggest the present claimed invention. Therefore, the current claimed invention patentably defines over

Brys in view of Izumiyama, and the Examiner is respectfully requested to reconsider and withdraw the 103(a) rejections of claims 5-8 and 17-20.

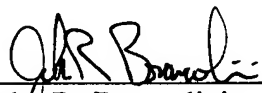
Conclusion

The present invention is not taught or suggested by the prior art. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejection of the claims. An early Notice of Allowance is earnestly solicited.

The Commissioner is hereby authorized to charge any fees associated with this communication to Deposit Account No. 19-5425

Respectfully submitted

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Date



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